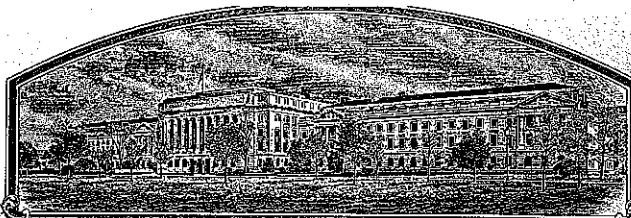


No.

200200035



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company LLC

Whereas, THERE HAS BEEN PRESENTED TO THE

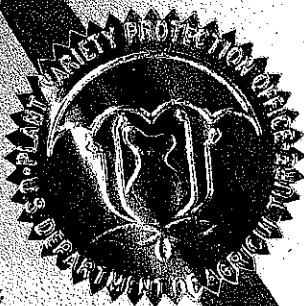
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'02324990'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this second day of May, in the year two thousand two.

Attest:

[Signature of Commissioner] *[Signature of Secretary of Agriculture]*

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE <i>(Instructions and information collection burden statement on reverse)</i>		The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).	
1. NAME OF APPLICANT(S) <i>(as it is to appear on the Certificate)</i> Asgrow Seed Company LLC		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER AGF29910	3. VARIETY NAME 02324990
4. ADDRESS <i>(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)</i> 634 E. Lincoln Way Ames, IA 50010		5. TELEPHONE <i>(include area code)</i> 515-232-7170	FOR OFFICIAL USE ONLY 200200035 FILING DATE 12/5/2001 FILING AND EXAMINATION FEE 2705.00 DATE 12/5/2001 CERTIFICATION FEE 320.00 DATE 3/8/02
		6. FAX <i>(include area code)</i> 515-232-6905	
7. GENUS AND SPECIES NAME Glycine max (L.) Merr.		8. FAMILY NAME <i>(Botanical)</i> Leguminosae	
9. CROP KIND NAME <i>(Common Name)</i> Soybean			
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION <i>(corporation, partnership, association, etc.) (common Name)</i> Corporation			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware		12. DATE OF INCORPORATION December 22, 1997	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Donald Steffen 634 E Lincoln Way Ames, IA 50010		14. TELEPHONE <i>(include area code)</i> 515-956-3002	
		FAX <i>(include area code)</i> 515-232-6905	
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED <i>(Follow instructions on reverse)</i> <input checked="" type="checkbox"/> a. Exhibit A. Origin and Breeding History of the Variety <input checked="" type="checkbox"/> b. Exhibit B. Statement of Distinctness <input checked="" type="checkbox"/> c. Exhibit C. Objective Description of the Variety <input checked="" type="checkbox"/> d. Exhibit D. Additional Description of the Variety <input checked="" type="checkbox"/> e. Exhibit E. Statement of the Basis of the Applicant's Ownership <input checked="" type="checkbox"/> f. Voucher Sample (2,600 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository) <input checked="" type="checkbox"/> g. Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? <i>(See Section 83(a) of the Plant Variety Protection Act)</i> <input type="checkbox"/> YES <i>(if "yes," answer items 18 and 19 below)</i> <input checked="" type="checkbox"/> NO <i>(if "no," go to item 20)</i> BT: 12/7/2001 per applicant's permission			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRY? <input type="checkbox"/> YES <i>(if "yes," give names of countries and dates)</i> <input type="checkbox"/> NO USA - December 11, 2000			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT <i>(Owner(s))</i>		SIGNATURE OF APPLICANT <i>(Owner(s))</i>	
NAME <i>(Please print or type)</i> Donald Steffen		NAME <i>(Please print or type)</i>	
CAPACITY OR TITLE Manager, IP & Regulatory Affairs	DATE	CAPACITY OR TITLE	DATE

ASGROW SEED COMPANY LLC
PVP APPLICATION - 02324990

EXHIBIT A

ORIGIN AND BREEDING HISTORY

1995 - Final cross was made at Ames, Iowa.

Parentage: mp13404/3/A3431//A2835/40-3-2

1995 - F1 generation was grown at Isabela, Puerto Rico and advanced using modified single seed descent.

1996 - F2 generation was grown at Isabela, Puerto Rico and advanced using modified single seed descent.

1996 - F3 bulk populations were grown at Ames, Iowa and single plants pulled.

1997 - F3 derived F4 plants were grown at Galena, Maryland in PRYT rows and variety 02324990 was selected based on yield.

1997 - F3:5 breeder seed was grown for progeny row increase at Isabela, Puerto Rico.

1998 - F6 seed was grown in yield tests at 8 locations in the midwestern U.S..

1999 - F7 seed was grown in yield tests at 34 locations throughout the U.S.

Variety 02324990 is uniform and stable within commercially acceptable limits based on trial observations since 1998. As with any other soybean variety, variants can occur for almost any characteristic during the course of repeated sexual reproduction.

200200035

ASGROW SEED COMPANY LLC
PVP APPLICATION - 02324990

EXHIBIT B

NOVELTY STATEMENT

To our knowledge, the soybean varieties that closely resemble 02324990 are A2835, and A3431:

1. RR TM gene (Tolerance to glyphosate herbicide)	02324990	- Present
	A2835	- Absent
	A3431	- Absent
2. Pubescence color	02324990	- Gray
	A2835	- Gray
	A3431	- Gray
3. Hilum color	02324990	- Buff
	A2835	- Imperfect Black
	A3431	- Imperfect Black

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

**EXHIBIT C
(Soybean)**

**OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (*Glycine max* (L.) Merr.)**

NAME OF APPLICANT(S) Asgrow Seed Company LLC	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 634 E. Lincoln Way Ames, IA 50010	PVPO NUMBER 200200035
	VARIETY NAME 02324990
	TEMPORARY OR EXPERIMENTAL DESIGNATION AGF29910

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in the first box (e.g. **0 9 9** or **0 9**) when number is either 99 or less or 9 or less respectively. Data for quantitative

plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal

Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:

Please answer all questions for your variety; lack of response may delay progress of your application.

A. MORPHOLOGY

Seed Shape:

2	1 = Spherical (L/W, L/T, and T/W ratios < 1.2) 3 = Elongate (L/T ratio > 1.2; T/W ratio < 1.2)	2 = Spherical-Flattened (L/W ratio > 1.2; L/T ratio < 1.2) 4 = Elongate-Flattened (L/T ratio > 1.2; T/W ratio > 1.2)
----------	---	---

Seed Coat Color:

1	1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (Please Specify) _____
----------	---

Seed Coat Luster:

1	1 = Dull 2 = Shiny
----------	----------------------------------

Seed Size:

1	3	.	2	grams/100 seeds
----------	----------	---	----------	-----------------

Hilum Color:

1	1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other (Please Specify) _____
----------	---

Cotyledon Color:

1	1 = Yellow 2 = Green
----------	------------------------------------

A. MORPHOLOGY (Continued)

Seed Protein Peroxidase Activity:

200200035

1 = Low 2 = High

(NOT TESTED: APPLICANT'S PERMISSION (12/7/2001).
Hypocotyl Color:

1 = Green 2 = Green with Bronze 3 = Light Purple 4 = Dark Purple extending to
'Evans' or 'Davis' Bands below Cotyledon below Cotyledons unifoliolate leaves ('Hodgson',
'Woodworth' or 'Tracy' 'Beeson' or 'Pickett 71' 'Coker', or 'Hampton 266A')

Leaf Shape:

1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Please Specify) _____

Flower Color:

1 = White 2 = Purple 3 = White with a Purple Throat

Pod Color:

1 = Tan 2 = Brown 3 = Black

Pubescence Color:

1 = Gray 2 = Brown (Tawny) 3 = Light Tawny

Plant Habit:

1 = Determinate 2 = Semi - Determinate 3 = Indeterminate 4 = Intermediate

Maturity Group:

<input type="text" value="0"/> <input type="text" value="5"/>	1 = 000	2 = 00	3 = 0	4 = I	5 = II
	6 = III	7 = IV	8 = V	9 = VI	10 = VII
	11 = VIII	12 = IX	13 = X	14 = XI	15 = XII

Maturity Subgroup:

Please enter a value from 0 - 9

B. DISEASE REACTIONS

0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Bacterial

Bacterial Pustule (*Xanthomonas campestris* pv. *glycines* (Nakano) Dye)

Bacterial Blight (*Pseudomonas syringae* pv. *glycinea* (Coerper) Young, Dye, & Wilkie)

Wildfire Blight (*Pseudomonas syringae* pv. *tabaci* (Wolf & Foster) Young, Dye, & Wilkie)

Fungal

Brown Spot (*Septoria glycines* Hemmi)

Frogeye Leaf Spot (*Cercospora sojina* Hara)

0	race 1	0	race 2	0	race 3	0	race 4
0	race 5	0	race 6	Other (Please Specify) _____			

200200035

0	Target Spot (<i>Corynespora cassiicola</i> (Berk. & Curt.) Wei)
0	Downey Mildew (<i>Peronospora trifoliorum</i> var. <i>manchurica</i> (Naum.) Syd. ex Gäum)
0	Powdery Mildew (<i>Microsphaera diffusa</i> Cke. & Pk.)
0	Brown Stem Rot (<i>Phialophora gregata</i> (Allington & Chamberlain) W. Gams.)
0	Stem Canker (<i>Diaporthe phaseolorum</i> (Cke. & Ell.) Sacc. var. <i>caulivora</i> Athow & Caldwell)
0	Pod and Stem Blight (<i>Diaporthe phaseolorum</i> (Cke. & Ell.) Sacc. var. <i>sojae</i> (Lehman) Wehm.)
0	Purple Seed Stain (<i>Cercospora kikuchii</i> (T. Matsu. & Tomoyasu) Gardener)
0	Rhizoctonia Root Rot (<i>Rhizoctonia solani</i> Kühn)

Phytophthora Root Rot (*Phytophthora megasperma* Drechs. f. sp. *glycinea* (Kuan & Erwin))

2	race 1	2	race 8	2	race 15	1	race 22
2	race 2	2	race 9	1	race 16	2	race 23
2	race 3	2	race 10	2	race 17	2	race 24
1	race 4	2	race 11	1	race 18	1	race 25
1	race 5	1	race 12	1	race 19	2	race 26
2	race 6	2	race 13	1	race 20	2	Other (Please Specify) :
2	race 7	1	race 14	2	race 21	<u>Races 28, 29, 30</u>	

0	Bud Blight (Tobacco Ringspot Virus)
0	Yellow Mosaic (Bean Yellow Mosaic Virus)
0	Cowpea Mosaic (Cowpea Chlorotic Virus)
0	Pod Mottle (Bean Pod Mottle Virus)

6

B. DISEASE REACTIONS (Continued) 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Seed Mottle (Soybean Mosaic Virus)

Nematode

200200035

Soybean Cyst Nematode (*Heterodera glycines* Ichinohe)

<input type="text" value="0"/> race 1	<input type="text" value="0"/> race 4	<input type="text" value="0"/> race 9
<input type="text" value="0"/> race 2	<input type="text" value="0"/> race 5	<input type="text" value="0"/> race 14 (former r. 4)
<input type="text" value="2"/> race 3	<input type="text" value="0"/> race 6	<input type="text"/> Other (Please Specify) _____

Lance Nematode (*Hoplolaimus columbus* Sher)

Southern Root Knot Nematode (*Meloidogyne incognita* (Kofoid & White) Chitwood)

Northern Root Knot Nematode (*Meloidogyne hapla* Chitwood)

Peanut Root Knot Nematode (*Meloidogyne arenaria* (Neal) Chitwood)

Reniform Nematode (*Rotylenchus reniformus* Linwood & Olivera)

Javanese Nematode (*Meloidogyne javanica* (Treub) Chitwood)

Other Nematode (Please Specify) _____

C. PHYSIOLOGICAL RESPONSES 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Iron Chlorosis on Calcareous Soil

Phosphorus

Boron

Aluminum

Salt

Drought

Other (Please Specify) _____

D. INSECT REACTIONS

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

☐ 0 Mexican Bean Beetle (*Epilachna varivestis* Mulsant)☐ 0 Potato Leaf Hopper (*Empoasca fabae* (Harris))☐ Other (Please Specify) _____

200200035

E. HERBICIDE REACTIONS

0 = Not Tested

1 = Susceptible

2 = Resistant

☐ 2 Metribuzin☐ 0 Bentazone☐ 1 Sulfonylurea☐ 2 Glyphosate☐ 1 Glufosinate☐ 0 Pendimethalin☐ Other (Please Specify) _____**F. TRANSGENIC COMPOSITION**

Has the development of the Subject Variety included the insertion or removal of genetic material? ☒ YES ☐ NO
If yes, please complete the following information requests*. Use additional pages if necessary.

1. Please state the vector's name:
2. Please state the vector components:
3. Please describe the genetic material successfully transferred into the Subject Variety:
4. Please describe the insertion protocol:

* A literature citation(s) explaining the four information requests above may be an acceptable alternative to completion of the "Transgenic Composition" portion of this form.

U.S. Patent No. 5,776,760. Issue Date: July 7, 1998. Inventor: Barry, Gerard, and Kishore, Ganesh. Assignee: Monsanto Company. Patent Application No. 484,274.

ABSTRACT: Genes encoding a glyphosate oxidoreductase enzyme are disclosed. The genes are useful in producing transformed bacteria and plants which degrade glyphosate herbicide as well as crop plants which are tolerant to glyphosate herbicide.

8

G. BIOCHEMICAL MARKERS

Please describe any biochemical information here which you believe will be helpful in further describing the Subject Variety (*e.g.* Simple Sequence Repeats, Restriction Fragment Length Polymorphisms, Isozymic Characterization). Use additional pages if necessary.

H. COMMENTS

9

ASGROW SEED COMPANY LLC
PVP APPLICATION - 02324990

EXHIBIT D

ADDITIONAL DESCRIPTION OF INVENTION

02324990 is a late maturity group II variety with resistance to Roundup[™] herbicide. It has very high yield potential. It has superior yields to lines of similar maturity and has excellent agronomic characteristics, including lodging resistance. It has a major gene for Phytophthora resistance, Rps1c, conferring resistance to many races of Phytophthora Root Rot. In tests, it has beaten DEKALB CX262RR by 113 % overall, winning at 25 of 34 locations. It is adapted to the late maturity group II growing areas of Iowa, Illinois, Indiana, and Nebraska. It has slightly above average appearance.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE**EXHIBIT E**
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paper Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Asgrow Seed Company LLC	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER AGF29910	1. VARIETY NAME 02324990
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) 634 E. Lincoln Way Ames, IA 50010	5. TELEPHONE (Include area code) 515-232-7170	6. FAX (Include area code) 515-232-6905
		7. PVPO NUMBER 200200035

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block.

If no, please explain.

YES ☒ NO ☐

9. Is the applicant (individual or company) a U.S. National or a U.S. based company?

If no, give name of country

YES ☒ NO ☐

10. Is the applicant the original owner?

If no, please answer one of the following: .

YES ☒ NO ☐

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO

If no, give name of country

11. Additional explanation on ownership (If needed, use the reverse for extra space):

Please Note:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 6 minutes per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotope, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal opportunity employer.

STD-470-E (07-97) (Destroy previous editions). Electronic version designed using WordPerfect InForms by USDA-AMS-IMB.